

# Mechanical and Chemical/Biological Spill Response Methods

PUB-RR-710

December, 2003

When a spill occurs, there are a number of response actions that can be taken to mitigate the spill. These actions can vary depending on whether the spill is on land or on water, and include mechanical as well as chemical and/or biological methods. For most spills, regardless of whether they are on land or water, mechanical containment and recovery of the spilled material is the typical response.

## Spills on Water

When spills reach the water, **mechanical** containment and recovery equipment used to collect spilled material include:

- booms (which contain and absorb the spilled materials);
- barriers (which prevent the movement and dispersal of spilled materials); and
- skimmers (which collect the spilled materials from the top of the surface water).



**Chemical and biological** methods are also marketed for use in conjunction with mechanical means for containing and cleaning up certain types of spills. These methods are most commonly used for oil spills in marine environments, not fresh water environments. Chemical and biological agents are federally regulated for use on oil spills in the water. These regulations are found in Subpart J of the National Contingency Plan (NCP), which is available on the U.S. Environmental Protection Agency's (EPA) web site at [www.epa.gov/oilspill/ncp/](http://www.epa.gov/oilspill/ncp/). The NCP establishes the process for authorizing the use of the following:

- ★ dispersants
- ★ surface washing agents;
- ★ surface collecting agents;
- ★ bioremediation agents; and
- ★ miscellaneous oil spill control agents.

The NCP Product Schedule is the federal government's listing of chemical countermeasures (please note that the federal government does not authorize the use of dispersants in freshwater environments). During or after a specific spill, a responder may request approval from state and federal agencies for use of one of these countermeasures. As the trustee for the state of Wisconsin, the Wisconsin Department of Natural Resources (DNR) is the agency which must grant approval for the use of any chemical or biological agent for spill response on water.

**In Wisconsin, as in many other states, approval has not been granted for the use of a chemical or biological countermeasure.** Responders may not use a chemical or biological countermeasure without site specific state and federal approval, and the product must be listed on the Product Schedule. The NCP Product Schedule does *not* authorize or pre-approve use of any of the listed products, nor does inclusion on the Product Schedule mean the product will work. It simply means that the required data was provided to EPA by the chemical's manufacturer.

**Hazardous Substances** are defined in s. 292.01(5), Wis. Stats., as "any substance or combination of substances including any waste of a solid, semisolid, liquid or gaseous form which may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or which may pose a substantial present or potential hazard to human health or the environment because of its quantity, concentration or physical, chemical or infectious characteristics."

## Spills on Land

For spills that are contained on land, responders may use mechanical and/or chemical/biological methods they determine necessary when an emergency involves fire or imminent threats to human health. There is no specific law in Wisconsin that addresses the use of these types of products. However, the department urges caution in the use of chemical and/or biological agents as these materials are considered *hazardous substances* (see adjacent box) if allowed to enter the waters of the state (including storm sewers). Any chemical or biological agent used must be contained and collected along with the spilled material for proper disposal.



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Mechanical methods, including booms, absorbents, and physical barriers are the most frequently used response tools for clean up and containment of spills on land. Containment of the spill to prevent it from reaching the water is typically the most effective action to reduce the spread of contamination and minimize overall threats to the environment.

## State Statutory Exemptions

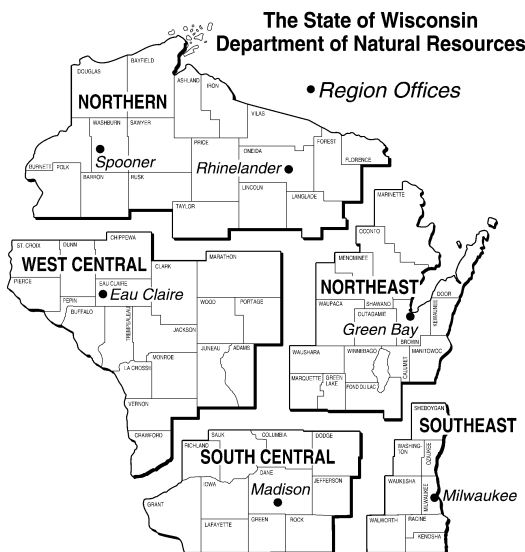
The spill law, Section 292.11(9), Wis. Stats, states that *law enforcement officers or member of a fire department* using hazardous substances in carrying out their responsibility to protect public health, safety and welfare **are exempted from the penalty requirements of the statute**. They are not, however, exempted from complying with the spill law requirement to report a release of a hazardous substance occurring within the performance of their duties to the DNR and to restore the environment to the extent practicable. In addition, they are not exempted from federal regulations regarding chemical and biological countermeasures.

## DNR Support

The department has staff (wardens and regional spill coordinators) who can provide technical assistance in responding to the spill as well as assessing the appropriateness and potential impacts of the application of specific countermeasures. Remember, you need DNR approval to use any chemical or biological agent as part of your spill response protocol. Contact your Regional Spill Coordinator for more information (see below).



The department cautions that all parties involved in the use of a chemical or biological countermeasure be aware of the liabilities associated with the use of that product in a spill response. Those who use a chemical or biological countermeasure are responsible for any environmental impact caused by the use of that product. The restoration of the environment is required for any discharge to the environment of a hazardous substance, regardless of whether the discharge occurred as a result of responding to another discharge. In most situations, mechanical methods of response are adequate to contain and control a spill. **For more information** on DNR's spills program, visit our web site at [www.dnr.state.wi.us/org/aw/rr/spills/index.htm](http://www.dnr.state.wi.us/org/aw/rr/spills/index.htm).



### DNR Regional Spill Coordinators:

- **Northern Region**  
Norm Dunbar (715) 365-8963
- **Northeast Region**  
Roxanne Chronert (920) 492-5592
- **Southeast Region**  
Scott Ferguson (414) 263-8685
- **South Central Region**  
Ted Amman (608) 275-3332
- **Western Region**  
John Grump (715) 839-3775

This document contains information about certain state statutes and administrative rules but does not necessarily include all of the details found in the statutes and rules. Readers should consult the actual language of the statutes and rules to answer specific questions. The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240

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